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Happy in the Informal Economy? A Case Study of Well-Being Among Day Labourers in South Africa*

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Abstract

Past research provided evidence of the negative effect that individual unemployment can have on subjective well-being. The persistent high levels of unemployment and poverty in South Africa have been well documented. Many people are forced into the informal economy, where they engage in a variety of survivalist activities such as day labouring. As no previous study has been conducted on the well-being of day labourers, the aim of this paper is to investigate the determinants of the well-being of South African day labourers. Objective and subjective functions are compared to determine the role of income and other variables in the well-being of day labourers. The determinants are categorised according to economic, comparison and attitudinal variables. The objective function uses income and the subjective function uses the binary measure of ‘experiencing a good week in terms of wages’ as dependent variables. The results showed that comparison variables are important determinants for the subjective measure of well-being, and attitudinal variables are important for the objective measure of well-being. The economic variables were important in both functions. The findings of this paper confirm other research findings showing that personal income is important for well-being in a poor community. The difference between these functions indicates that the subjective and objective measures of well-being both capture valuable characteristics of SWB in a poor community.

JEL classification: J21, J24

Key words: Day labouring, Well-being, Happiness, Informal economy

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1 Introduction and aim of the paper

There was a time when the study of well-being, and subjective well-being in particular, was for the most part excluded from economic analysis as a result of the disciplinary paradigm of logical positivism. Yet economic theories often include reference to values, expectations, and the like (Easterlin 2001: 225).

Since the 1940s the landscape has changed, and, recently, Helliwell and Barrington-Leigh (2010) have argued that growing awareness is being raised in academic, policy, and public areas to subjective measures of well-being. This represents an important shift towards greater realism in the study of economic behaviour. Subsequently, a significant body of literature emerged on the determinants of well-being in developed countries. Recent research findings on well-being in developing countries specifically have added more depth to the development debate (Tiwari 2009: 129).

Most studies on subjective well-being in transitional economies focus on either rural areas or gender groups. Prominent scholars in South Africa ensured that South Africa's transitional experience and its influence on well-being form part of this important research agenda (Møller and Schlemmer 1989; Møller 1998; Møller and Saris 2001; Møller and Dickow 2002; Ebrahim, Botha, and Snowball 2011; Botha and Booysen 2011). A constant theme in the South African literature is that, in the main, the wealthier testify to higher levels of satisfaction and happiness than the worse-off. The most credible rationalization for the South African quality-of-life environment is the significant gap in living standards between rich and poor (Møller and Dickow 2002). Møller and Saris (2001) emphasise this by providing the example of people of the Western Cape being as a rule happy, satisfied and optimistic. On the other hand, people in the Eastern Cape, a province with high levels of unemployment and deep poverty, are principally unhappy, dissatisfied and pessimistic.

Cramm, Møller and Nieboer (2010: 1013) state that there is a scarcity of research on well-being among the poorest of the poor. As a result, the experiences in terms of the well-being of marginalised groups in the South African labour market have not received sufficient attention in South African research on the subject.

Past research results provided evidence of the negative effect that individual unemployment can have on subjective well-being (Winkelmann 2009: 421). The persistent high levels of unemployment and the severity of absolute poverty in South Africa have been well documented. As a result many people are forced into the informal economy, where they engage a variety of survivalist activities. Offering their labour on street corners and at intersections as day labourers is a pertinent example in this regard. Blaauw (2010) found no pure economic rationale for the sustainability of this activity, given the cost and the low and uncertain levels of income in this market. Yet many day labourers have been involved in this activity for many years. Researching the well-being in this informal labour market is an important extension of the research into the employee side of the informal economy. It takes cognisance of subjective sociological and psychological factors as well, which hypothetically may be elements of an eco-

nomic motive, explaining the continued sustainability of this activity.

No previous study has been conducted on the well-being of those involved in this informal labour market activity. This paper fills this void in the literature by investigating the well-being of day labourers in South Africa. The research will focus on the relationship between income and subjective well-being of South African day labourers in order to establish the important determinants of the subjective well-being of participants in this informal labour market activity. In doing so, the paper contributes to informing policy debates in South Africa and in the region on issues of social protection and quality-of-life for workers in this extreme form of casualised employment. The hypothesis that emerges from the literature is that economic variables play a defining role in the well-being of poorer communities.

2 Literature review

Conventional wisdom around the effect of income on happiness is divided. The traditional view of money and happiness is that money has little impact on happiness. In fact, intellectuals and philosophers (e.g. Rousseau in 1762) have warned through the ages that wealth spoils the mind and is therefore not good for one (Hirata 2011: 23). In a seminal article Easterlin (1974) postulated that well-being measures are not related to national wealth. This finding was based on a small sample of nations (Diener, Lucas, Schimmack, and Helliwell 2009: 164). This view, however, has constantly been challenged by empirical findings to the contrary (Cummins 2000: 133). It is now accepted that there is a relatively strong correlation between well-being and national income levels.

Results on an individual level are slightly more complicated, as the correlation coefficients are to some extent difficult to interpret. There are, however, strong theoretical grounds to expect that income will be associated with well-being, especially in the case of poorer people (Diener, Lucas, Schimmack, and Helliwell 2009: 86). Cummins (2000: 151) found that personal income is important for subjective well-being, especially for people who are poor. This was confirmed by Nielsen, Paritski and Smyth (2010). The positive relationship between happiness and absolute income is considered to be one of the best-known findings in the literature (Ebrahim, Botha and Snowball 2011: 5; Hirata, 2011: 28). Diener, Sandvik, Seidlitz and Diener (1993: 216) also found that income is correlated with subjective well-being in lower-income countries. The effect of income on happiness is more pronounced in developing countries than in developed countries, since once a certain threshold of income is achieved in developed countries, higher income does not aid higher levels of well-being (Clark, Frijters and Shields 2008).

In spite of the fact that standard microeconomic theory usually views utility as a function of own absolute income, some economists have proposed models in which the income of others enters the individual's utility function (Kingdon and Knight 2007). After the literature acknowledged the link between income and happiness, the debate shifted focus to the relative or absolute nature of the

relationship (Veenhoven 1991; Diener et al. 1993). The absolute argument has as its premise in view that “... *income helps individuals meet certain universal needs and therefore that income, at least at lower levels, is a cause of subjective well-being. The relativity argument is based on the idea that the impact of income or other resources depends on changeable standards such as those derived from expectancies, habituation levels, and social comparisons*” (Diener et al. 1993). There is at present significant empirical evidence for the belief that subjective well-being depends on relative income as well, as defined by the reference group or the reference timeframe that people have in mind (Kingdon and Knight 2003; 2007). Happiness is therefore strongly affected by status in society (Clark et al. 2008; Ebrahim et al. 2011).

Absolute and relative income is not the only economic determinant of happiness (Kingdon and Knight 2003). The multifaceted nature of subjective well-being is now recognised in the literature, where subjective well-being is associated with a range of social, economic, and cultural characteristics of nations (Diener, Diener and Diener 2009). An excellent review of the factors emerging from documented research can be found in Diener, Sue, Lucas and Smith (1999). Frey and Stutzer (2002) as well as Dolan, Peasgood and White (2008) also provide reviews on the large economics literature on the determinants of happiness.

Determining factors identified in the literature apart from absolute and relative levels income include religious activities, social trust, physical exercise, health and marital status (Botha and Booysen 2011: 3). Demir and Weitekamp (2007: 182-183) proposed a grouping of three main factors that influence happiness, namely the happiness set point (assumed to be heritable, fixed and stable over time), circumstances (geographical, demographical and contextual variables) and intentional activities (voluntary and purposeful actions by individuals).

These factors play a role in both rich and poor geographical areas. Even amidst the severe poverty of rural China, factors such as attitudes, social comparisons and aspirations influence the subjective well-being of the local inhabitants (Knight, Song and Gunatilaka 2009: 635).

In the South African context Greyling (2011) identified issues such as service delivery, levels of human development, social relations, material well-being and issues of governance and safety as important aspects, explaining the variation in the quality-of-life scores of people in the Gauteng City region (GCR). A further distinguishing aspect to keep cognisance of for this study is the possible impact of migratory status, especially given that a meaningful proportion of our sample consisted of migrant day labourers. The literature reveals that some important additional elements come to the fore when the subjective well-being of migrant workers is analysed. Gao and Smyth (2010: 1) found that expectations with regard to prospective future income are a central determinant of happiness for migrant workers in China. Their finding: “... *suggests that many migrants expect their financial position and, by extension, their lives more generally to get better in the future and that this is having a positive effect on their current levels of happiness. The effect of optimistic expectations outstrips any realistic*

increase in own income.” A study with potentially important implications for the level of subjective well-being prevailing in the day labour market in South Africa is that of Knight and Gunatilaka (2008). Using 2002 CIPS data, they tried to elucidate why the mean happiness score of rural-urban migrants is lower than that of those who stay behind in the countryside and of those who have an urban household registration. The authors explain that the aspirations of migrants mount in the cities. However, in many cases their expectations exceed their achievements (Gao and Smyth 2010). This raises the question as to what the position in South Africa would be, given the acute levels of poverty.

The possible variables emerging from the literature will provide the theoretical motivation for the selection of the variables for the empirical section of the study. The nature of the day labour market in South Africa is discussed next to contextualize the empirical study and results.

3 The day labour market in South Africa

One of the most visible forms of precarious employment in South Africa is day labouring as an informal economy activity, which has emerged in recent years. Workers congregate on street corners in all cities or towns in the country, seeking temporary employment for the day or for a limited extended period. In the United States immigrant workers (mostly from Latin America) use this job-seeking strategy to get a foothold in the economy of their host country. In South Africa, on the other hand, this informal labour market activity is mainly the catchment area of those who have lost their job in the formal economy and who are unable to secure reemployment there, although immigrants from the rest of Southern Africa also join this informal labour market and compete with their South African counterparts for the available temporary employment on offer. In South Africa research on this informal labour market has been done by Schenck and Louw (2005) as well as Blaauw et al. (2006) and Blaauw (2010). It was estimated that in 2005/2006 at least 45 000 people, mostly male and African, congregated at more than a 1 000 places in South Africa to seek casual employment (Blaauw 2010). The day labourers earn low and uncertain levels of income, leaving many of them in a state of deprivation and poverty. This informal labour market activity formed the basis for a country-wide survey to investigate the socio-economic position of such labourers in the broader South African economy. The results of the survey provided the opportunity to investigate the determinants of subjective well-being in this part of the informal economy of South Africa.

4 Survey Methodology

Valenzuela Jr, Theodore, Meléndez and Gonzalez (2006) conducted a nation-wide study among day labourers in the United States. The study entailed a country-wide survey of 2 660 day labourers. These workers were randomly

selected at 264 hiring sites in 139 municipalities in 20 states and the District of Columbia (Valenzuela Jr. et al. 2006: i). The methodological approach in their study represents the best practice in terms of survey research in such a fluid environment. The South African survey followed the same methodology as the American study as far as it was possible.

The day labour market is extremely fluid. New workers enter this market daily and existing day labourers leave it simultaneously. Therefore, some hiring sites shrink in size or disappear altogether, while new ones surface at the same time (Valenzuela Jr. et al. 2006: 4). To address these issues Valenzuela Jr. and his co-researchers aimed to identify as many day labour sites as possible, develop a random sampling frame and employ a screening mechanism, allowing them to identify day labourers (Valenzuela Jr. et al. 2006: 27). This process was adapted for the South Africa situation.

In line with the method of Valenzuela Jr. et al. (2006), in 2005 and 2006 researchers associated with the present study went around the country and physically counted the number of day labourers in the various cities and towns and conducted preliminary interviews, using a short set of structured questions. In a follow-up survey the researchers recorded the names of the streets where the day labourers congregated and counted the number of day labourers present at each site (Blaauw 2010: 75).

The national census of the day labour workforce in South Africa represents a snapshot of this workforce at that particular time. It could not incorporate workers who might enter or leave this informal labour market during a particular year. Therefore, the number reported is likely to be higher if we were to replicate the survey in subsequent years or if one was able to measure workers who participate in this market during a one-year period. The important implication of this is that the estimated numbers will undercount the total size of the day labour workforce, since they do not account for workers who were hired prior to the time that the count was taken or workers who regularly use the hiring site but for some reason did not search for work on the day when we surveyed (Valenzuela Jr. et al. 2006: 4). The 2005/2006 survey of day labourers showed that there were close to 1 000 locations in South Africa¹ where people were picked up, and an estimated 45 000, mostly African men, stood at these sites looking for income each day.²

The sampling procedure was guided by the same doctrine that guided the sampling technique used by Valenzuela Jr. et al. (2006) and adapted by Blaauw et al. (2006) and Louw (2007). It was impossible to compile an all-inclusive list with the names of all the day labourers in South Africa due to their persistently changing numbers and the flexible nature of this form of labour. A whole host

¹ See Harmse, Blaauw and Schenck (2009:362) for a detailed description of the locations at municipal level.

² This estimate is the minimum number of day labourers observed during the course of the survey. It sometimes happened that when a member of the project team arrived at a particular hiring site later in the day, only a few men were still standing there. The remaining day labourers would then indicate that many more men usually stood at that site, but that they had been hired for the day or had left already.

of variables relating to geographic area, size and nature of hiring sites had to be taken into account in selecting a representative sample of day labourers in South Africa. The capitals of all provinces and important hubs in the rural areas had to be covered proportionally in terms of the number of day labourers present. A process of cluster sampling as a probability sampling technique was considered to be the most appropriate for the survey (Rubin and Babbie 1997: 259; Bless and Higson-Smith 1995: 93). Clustering had to take place both in terms of the number of day labourers interviewed in each centre, as well as the size of the various hiring sites in order not to over-represent rural in comparison to urban areas and big hiring sites in comparison to small sites and *vice versa*. This is deemed to be the best practice to ensure a sample that is as representative as possible of the characteristics of the research population (Valenzuela Jr. et al. 2006). Another important measure to ensure that the results of the survey are as unbiased as possible was the conducting of a pilot study in a smaller geographical area (Blaauw et al. 2006). Following the same best practice the results of the pilot study and the main survey for Pretoria were compared and yielded consistent results that are complementary and not contradictory.³

In practice, the sampling process also had to entail the use of some convenience sampling when appropriate. If a fieldworker for example travelled through a small town towards one of the sampled towns in order to conduct the interviews and saw a small number of day labourers in that town, he or she was instructed to conduct interviews with some of the day labourers present. This gave the survey improved representativeness in terms of the number of towns that were covered in the procedure, without falling into the trap of not being able to evaluate the ‘goodness’ or reliability of the sample as explained by Williams, Sweeney and Anderson (2006: 301).

A sample of 10 per cent was regarded as sufficient to control for possible sampling error (De Vos, Strydom, Fouche and Delport 2004: 200). For the sample to be accepted as representative, between five and 10 per cent of the research population had to be interviewed countrywide. A proportional sample of nine per cent was set as a target for a suitable sample size for the number of interviews to be conducted in the various cities and towns in South Africa. It was estimated that a total of between 2 500 and 4 000 interviews had to be conducted across South Africa in order for a representative sample of the research population to be obtained.

The fieldwork was conducted from the end of February 2007 and was completed by the end of November 2007. Fieldworkers visited the predetermined hiring sites and randomly interviewed day labourers congregated there at the time. A total of 3 830 questionnaires were accepted for the study, representing no less than 8.5 per cent of the research population.

One of the key ethical elements of the survey was not to keep any day labourer from accepting an employment opportunity due to his participation in the interview. This meant that in some cases interviews were not completed

³In spite of the precautions it is imperative always to be aware of the limitations of the approach in terms of statistical interference.

in their entirety. Rather than lose the gained data by completely discarding the questionnaire, however, it was decided that the data that was gathered in the course of the (truncated) interview would be included. Including these incomplete questionnaires, however, meant that the data had to be cleaned in order for a complete sample fit for cross-sectional regression analysis to be obtained. After this process was completed the sample size was 2 645.

The following sections describe the basic descriptive statistics of day labourers in South Africa in 2007. What then follows is a discussion of the model and its estimation.

5 Descriptive statistics of day labourers in South Africa

5.1 Demographic features and employment history

Table 1 presents a summary of the basic demographic characteristics of the day labourers from the survey.

As was expected, the day labourers were almost exclusively male. The racial composition reveals that it is principally African and Coloured members of the population who engage in day labouring as an informal economic activity. This reflects the overall racial composition of the broader informal sector in South Africa as identified by Saunders (2005). The vast majority of day labourers can be classified as young. This is a manifestation of the persistent unemployment and under-employment among the young of South Africa (Vakalisa 2005: 53). Each day labourer supports an average of four people, excluding himself. These dependants also do not necessarily live in the same province as the day labourer, which shows the migratory nature of this informal labour-market activity. It is estimated that this informal labour market provides some income for at least 170 000 people (Blaauw 2010).

5.2 Income

Table 2 provides a summary of the earnings of day labourers in South Africa in a good week in 2007.

A significant characteristic of the day labour market in South Africa is the unstable and uncertain levels of income prevalent in this informal labour market. This is illustrated in Figure 1.

Theory suggests that this must definitely have an influence on the subjective well-being of day labourers in South Africa. This instability forms the key element for the model selection and empirical analysis described in the next section.

6 Model specification and estimation

The income–happiness relationship has for some time attracted the attention of economists (Mentzakis and Moro 2009). Many researchers have concluded that personal income has little influence on subjective well-being (Cummins 2000: 133), since it is an objective measure. According to Knight et al. (2009), satisfaction with household income is one possible measure of subjective well-being (SWB). However, the specific contribution of low income when there is poor health and prolonged periods of unemployment is uncertain. According to Cummins (2000: 134-135) there are two systematic reasons. Firstly, subjective variables tend to share more variance with subjective variables than objective variables. Thus it is less likely to find variance contributed by the objective variables (income). The second reason is that objective variables might change the strength of correlation between subjective variables.

To address the objective vs. subjective debate this paper uses two functions, namely a subjective and an objective function. The difference is the dependent variable. The first function will be a subjective function with the satisfaction level of income (is your income as good as expected?) as the dependent variable. One may at first glance think that this answer shows just the comparison between the actual and expected income, and that, therefore, it is far from subjective well-being. The argument would be that even if the actual income is as good as expected, it does not necessarily mean that the individual is satisfied or happy with it.

The use of this variable is justified, given the unique characteristic of this informal labour market activity. Research has shown that there are no traditional economic considerations such as optimality and wealth creation involved in this activity. The activity itself creates very little if any long-term wealth. From a micro-economic perspective there is no economic rationale for participation in this activity: it is merely a survival strategy for those involved in it (Blaauw 2010). Day labouring in South Africa is a reaction to a formal economy that is unable to clear the supply of labour, as predicted by classical labour-market theory. Day labouring is a catchment of this overflow, permanent in nature and with every possibility that the participants will become more and more isolated from the formal economy.

Day labourers are painfully aware that the labour supply in their market is increasing constantly. The possible day-labour income is to be shared among an ever-growing day-labour force, and a constantly diminishing level of real earnings in this labour market is expected (Blaauw 2010). This argument is supported by the fact that reservation wages are constantly falling across many informal labour markets (Theodore 2009). If a day labourer says his income is as good as or better than expected, it shows a level of subjective satisfaction, given the knowledge that this is not the case for many of his counterparts and the uncertainty and variance in the income of the respondents (see Figure 1). This was a constant theme in discussions with the respondents and convincingly motivates the use of this variable in the subjective function.

The second function will be the objective function, where the log of the

best wage earned per day is the dependent variable. The motivation for using an income variable in the objective function stems from the literature, which suggests that income is a very important indicator of well-being in poor communities (Cummins 2000). Given the low and uncertain income earned on average by the day labourers, it follows that at times when they do earn the best income levels in their labour market, this will bring about a feeling of happiness and improved SWB.

In the survey day labourers were asked what the minimum amount was they were prepared to work for. The data showed day labourers often have to work for much lower wages than that, rendering the reservation wage to be more of a desired wage than the reservation wage known in economic theory (Blaauw 2010). If they were able to obtain or get close to this wage it would increase their level of subjective well-being. The best wage earned per day in the preceding months before the interview revealed a much closer correlation to the desired wage per day as expressed by the day labourers, rendering this variable the one best suited for this exercise. Both these functions will have the same explanatory variables.

6.1 Explanatory variables:

This model is based on the research done by Mentzakis and Moro (2009) as well as Knight, Song and Gunatilaka (2009). It explicitly focuses on the potential important role of the economic variables in the well-being of very poor sections of the population as proposed by Cummins (2000). Other variables were included to act as control variables, but also to emphasise the important role that a range of non-economic factors may also potentially play in the explanation of subjective well-being (Kingdon and Knight 2004:11-12).

The two functions will be specified according to the basic approach in the literature, including basic variables, conventional economic variables, comparison variables, community variables and attitudinal variables as explanatory variables. The following variables from the day labourer survey were used and classified according to their broad categories:

6.2 Basic variables

The basic demographic variables appear as standard throughout the literature and are therefore included in this study as well. Gender (MALE), race (AFRICAN (B), other races as reference), age (TWENTIES, THIRTIES, FORTIES, OVER50, under twenty as reference) – age in this survey was not a continuous variable and was categorised (Nielsen et al. 2010: 728), and therefore it could not be treated as non-linear – education (PRIMARY, SECONDARY, COMPSEC (secondary school completed, no schooling as reference) and marital status (MARRIED, DIVORCED, single as reference).

6.3 Conventional economic variables

In this study income and employment pertaining specifically to the day labourers in South Africa and not of the country as proposed by Knight et al. (2009) are used. In their study Knight et al. (2009) determined the well-being of people in rural China, and they used the per capita income and employment rate in the country. In this study we are looking at the specific informal sector of day labourers. The income variable is the log of the wage in a good week (GOODWEEK) and employment variables are previously employed full-time (FULLTIME), looking for a full-time job (LOOKFULTIME), have you turned down a job (TURNDOWN). The employment variables are important in this scenario given the significant number of more than 50 per cent of the respondents who did previously have a fulltime job before becoming day labourers (Blaauw 2010). The literature review provided evidence of the negative effect that individual unemployment can have on subjective well-being (Winkelmann 2009: 421). As a result it is imperative to include the employment variables in the analysis.

6.4 Comparison variables

According to Mentzakis and Moro (2009), current income with regard to past circumstance and aspirations forms the subjective perception of the financial situation of the respondent. Knight et al. (2009) also indicate the importance of comparison variables. This study offers a unique case study opportunity to study these in an informal context. The following questions incorporate past circumstances and future aspirations as envisaged by Mentzakis and Moro (2009). Are job opportunities better at this site? (JOBSBETTERTHISITE), Do you have enough food? (FOOD). Again, the unique nature of this labour market renders it an acceptable comparison variable. Better job opportunities do not always lead to being hired more often, given that more day labourers flock to these sites as soon as the site's reputation for 'having better opportunities' becomes known. However, this very possibility makes the day labourer feel better. It does not guarantee a higher income, however. The change in the income variable (GOODWEEK) was also included as a comparison variable (CHANGE). These comparison variables are primarily a comparison of an individual at different times, or with other day labourers that the respondents know.

6.5 Community variables and attitudinal variables

Attitudes are mostly endogenous, explaining observed and unobserved characteristics, and exploring hidden aspects of the personality (Knight et al. 2009). The attitudinal variables are an attempt to control for personality, which affects subjective well-being. Although one can perhaps argue that economists do this quite badly, it is common in the literature and for this reason was incorporated. The attitudinal and community variables are combined in this study. Knight et al. (2009) used different provinces as community variables. In this study the

focus will only be on the well-being of day labourers in South Africa as a whole, and future research will concentrate on well-being in different provinces. The attitudinal and community variables are: Have you incurred an injury? (INJURY) Do you have a support group? (SUPPORT) Do you stay with family? (STAYFAMILY). These questions can inform the psychological state of mind or attitude towards their perception of their job or situation of the day labourer.

The expected signs of these explanatory variables are presented in Table 3 below.

7 The results of the objective and subjective functions of well-being

It may well be that people with higher levels of SWB are people with inherent characteristics that may lead them to work harder, earning more income in the process. This endogeneity problem is in most cases the result of not all variables being included in a data set one uses to control for this. Examples include personal characteristics and variables influencing the early life of the respondent (Clark et al. 2008). All data sets have this problem, and an instrumentation procedure can in principle be used to address the likely endogeneity of income in a happiness equation (Kingdon and Knight 2004: 15).

The income variable, log of the wage in a good week (GOODWEEK), will be instrumented because of endogeneity problems that occur with income when estimating SWB functions (Senik 2005: 46; Kingdon and Knight 2004: 15). The Hausman test for endogeneity indicated that the income variable (GOODWEEK) is indeed endogenous. Furthermore, the J-statistic probability was 0.0 and indicated the rejection of the null hypothesis indicating endogeneity of the variable. See the appendix for the results. The log of the lowest wage (LOWWAGE) and months as a day labourer (MONTHS) were used as instruments. The F-statistics are presented in the appendix (Bound, Jaeger and Baker 1995). The over-identifying restriction is one, since there are two Instrumental Variables (Wooldridge 2003). Testing for over-identifying restrictions showed that both the Instrumental Variables are exogenous. This was confirmed with the orthogonality test – C test. The p-values of the J-statistic were >0.05 and showed acceptance of the null hypothesis. See the results in the appendix. The results of these tests comply with the conditions for valid instruments i.e $Cov(z,u)=0$ and $Cov(z,x \neq 0)$ (Wooldridge 2003). Second-order tests on the regressions were done and corrected accordingly. The results of the estimations are compared in Table 4.

7.1 The objective function

The objective function was estimated with the 2 SLS method and the income variable was instrumented with lowest wage and months of day labouring. Most of the signs (significant coefficients) were in line with expectations, except the question *are jobs better at this site?*, which recorded a negative sign. If a day

labourer had a full-time job previously it recorded a positive sign. This observation is contrary to a priori considerations. Closer scrutiny of the day labour market reveals this as quite plausible, however. Although the job opportunities may be experienced as better at the current hiring site, this improvement may be marginal and the observed income uncertainty remains basically the same. As this is the objective function and the wages per site and income earned changes only marginally, this is not experienced by the day labourer as any real improvement in his well-being. In fact, it may add to a feeling of disappointment and disillusionment among day labourers. This further highlights the importance of income as a determinant of SWB in poor communities.

The positive sign of when a day labourer had a full time job earlier can possibly be explained by the fact that theoretically the income earned might be higher than what a full-time job can offer with the level of schooling attained by the day labourer. The evidence on income suggests the opposite, however. A more plausible explanation may therefore be that having had a full-time job in the past provided some form of vocational training that is now increasing the day labourer's chances of securing temporary employment and income in the informal economy.

The contributions of the significant determinants are primary and secondary education, which contributes 10 and 14 per cent to the SWB of the day labourer respectively. Being divorced decreases the SWB by 12%. A good week's wage increases SWB by 100%, being a full-time employee previously increases subjective well-being (SWB) by 7%, turned down a job decreases SWB by 15% and jobs better at this site decreases the SWB by 51%. SWB decreases by 12% if an injury occurred on the job, while and being part of a support group increases SWB by 19%. If a day labourer lives with his family the SWB increases by 14%. This is no surprise, as a significant number of the day labourers move to urban locations in search of employment and do not see their family on a regular basis. Day labourers stated this disconnect as an important concern in their lives. Those who are able to live with family will experience an improvement in well-being. Furthermore, living with family implies that potentially there are alternative income sources available to the day labourer. The day labourer's spouse/partner may be working, or income in the form of a government grant may be received.

The main determinants of the objective function are education (primary and secondary), almost all the economic variables (good week's wage, full-time job, and turn down a job) and the attitudinal variables (injury, support group and staying with family). The comparison variable 'are jobs better at this site' was also a determinant, but in a negative way. The main contributors to the objective function are the economic and attitudinal variables.

7.2 The subjective function

The dependent variable of the subjective function is binary, and therefore a probit model was fitted to the data and the income variable was instrumented with low wage and months of being a day labourer. All the significant coefficients'

signs were in line with expectations, except primary schooling and staying with family with negative signs (see explanation below). The contributions of the determinants to SWB are a decrease of 43, 29 and 22 per cent in the probability if you are male, with primary schooling or in the twenties age group respectively. A good week's wage increases the probability of SWB by 43% and being a full-time employee previously decreases SWB by 26%. This again confirms the notion that having lost their jobs in the formal economy, day labourers engage in day labouring as a survivalist activity, out of desperation. If jobs are better at this site and you have food it increases the probability of SWB by 100 and 53 per cent respectively. If there is a change in income for a good week it will have a 22% change in probability of SWB. If you live with family it decreases the probability of SWB by 15%. This result can potentially be explained by calling on the experience obtained during the interviews with the day labourers and the observed uncertainty in the income earned by the day labourers. In bad months, day labourers are not always able to provide for their families. To bear the impact of this is more difficult if the day labourer is living with family and *"... must face them every day with empty hands ..."* In a strange way it may be easier to bear that you cannot provide for your dependants if you do not see them every day. Some day labourers stated as much during interviews. This is an important social aspect that requires closer inspection through qualitative research via detailed case studies.

The main determinants of the subjective function are race, primary schooling, the twenties age group, the economic variables (good week's wage and full-time job) and all the comparison variables (having food, are jobs better at this site and the change in income). One attitudinal determinant is staying with family. The main contributors to SWB of a day labourer in this subjective function are the economic and comparison variables.

8 Comparing the subjective and objective function

The findings of this analysis are that economic variables, such as employment and income, do play an important part in well-being. This was the case for the objective as well as the subjective function.

Income in a good week had a positive and significant impact in both the functions. This is in line with other research. Cummins (2000: 151) found that personal income is a very important element in the sustainability of SWB, particularly for poor people. Diener, Diener and Diener (2009: 66) found that income, individualism, human rights and societal equality determine SWB. Similarly, in a study of taxi drivers in Beijing Nielsen et al. (2010: 728) found that despite earning low wages, their well-being was within the normative range. They also found that personal relationships and feeling part of a community as well as income play a role in well-being (Nielsen et al. 2010: 731). This is especially when the individual leads a hard life on objective indicators.

In a study determining the determinants of subjective well-being in South Africa, Kingdon and Knight (2007: 17) found that relative income plays a role in well-being, especially comparator income. It suggests that people choose their groups of comparison by reference to social proximity, in South Africa specifically by race. The comparative variables were significant in the subjective function, and, since the largest part of the sample is African, this confirms the findings by Kingdon and Knight (2007). Mentzakis and Moro (2009: 147) also found that relative income is important in determining subjective well-being.

An important difference between these two functions is the sign of having previously been employed full-time. The sign for the objective function is positive and for the subjective function is negative (expected sign), and they are both significant. One possible explanation for the positive sign might be that when the day labourer earns more income as a day labourer than as a full-time employee, the sign might be positive. The fact that the person does not have a full-time job anymore does not necessarily lead to a feeling of unhappiness with his current status in terms of income earned. An analysis of the income earned by day labourers shows that their income levels are very low on average and uncertain. Therefore, a more plausible explanation in this case is the relief experienced by day labourers: they might have lost their full-time employment, but are economically active again and at least some income is earned in this informal economy activity. The fact remains that day labouring in South Africa is mostly a catchment area for people who have lost their jobs, with very little prospect of a return to the formal economy (Blaauw 2010). Most respondents testified that they would prefer formal economy employment and the certainty it provides. In the subjective function therefore the person might feel that life would be better if there were more certainty about a job and income irrespective of the income earned, hence the negative sign.

The other difference between these two functions was between the comparison and attitudinal variables. In the subjective function, the comparison variables played a larger part – and this is because of the role that relative income plays in SWB (Mentzakis and Moro, 2009, and Kingdon and Knight, 2007). In the objective function the attitudinal variables were more important. Both these functions found that the economic variables are important. This confirmed the findings by Nielsen et al. (2010), Diener et al. (2009) and Cummins (2000) by showing that personal income is important in a poor community. These findings indicate that subjective and objective measures of well-being both capture valuable characteristics of SWB in a poor community. This opens up the possibility of further in-depth studies into social isolation as a determining factor for SWB in poor communities along the lines of the work of Thompson and Heller (1990).

9 Concluding remarks, possibly policy implications and a future research agenda

Many studies in subjective well-being investigate the well-being of geographical areas or specific gender groups within countries. Studies on specific sectors of the economy are much less common, and studies on specific informal labour markets even less so. The contribution of this study is to fill this gap in the literature by looking at a specific informal sector activity, namely that of day labouring in South Africa. The results of the study provided insight into the subjective well-being experienced by the participants in the informal economy activity of day labouring in South Africa. The unique characteristics of this informal labour market made it possible to estimate an objective and subjective well-being function, which in part address the debate around whether income can be deemed a measure of well-being.

The objective and subjective well-being functions showed that economic variables, such as employment and income, do play an important part in well-being. The results may appear obvious or even tautological. However, as Cummins (2000: 134-135) points out, the specific contribution of low income to well-being when there is poor health and prolonged periods of unemployment is uncertain. The results confirm the hypothesis of the importance of income for both the objective and subjective well-being of those living in extreme poverty.

The difference between these two functions (OLS) was that attitudes (injuries, being part of a support group and living with family) do play a role in the objective function, and comparison variables (having food, change in income and are jobs better at this site) are more important in the subjective function. These findings indicate that subjective and objective measures of well-being both capture valuable characteristics of SWB in a poor community.

It is also clear from the results that economics as a discipline could benefit significantly by utilising more qualitative research methods to supplement the traditional quantitative methods used. Failure of policy-makers to appreciate subjective well-being as a social indicator can in fact hinder development. Diener et al. (2009: 164) have shown how an analysis of unemployment incorporating well-being measures has the potential to increase our knowledge and understanding beyond what can be obtained using macro-economic measures on their own. This inclusive type of analysis will provide a more nuanced insight into the decision-making behaviour of individual economic agents in various sectors of the economy. Policy decisions will be better informed as a positive externality of extending the scope of accepted methodology in the discipline. The design of public policy will benefit, as it will be possible to better appraise policy interventions in terms of their effects on the well-being of the target population.

The results of this paper indicate that they are particularly applicable to social policy focusing on participants in the informal economy. A systematic accounting of well-being can inform social policy actions to improve the well-being of these individuals. The results of the study identified the role of injuries

and being part of a support group as affecting the objective well-being of day labourers in South Africa. Social policy can focus on these areas. The development of day labour centres along the lines of what has been done in the United States can serve as a practical step in improving the well-being of day labourers in South Africa. Centres like this can provide a safe area with toilet and washing facilities. Apart from basic services the centre can be the location from where a range of legal and other social services can be provided. This can ensure improved legal recourse in the event of non-payment of wages by an employer or injuries at the workplace. Training can also take place at these centres in order to improve the skills base of the day labourers, enabling them to earn better wages.

Apart from policy implications, the results of the study open up a new research agenda. The role of social relationships in the well-being of day labourers requires further focused research. Other important research opportunities to expand this field of research for the South African economy exist. Pertinent research questions that remain to be answered include possible geographical differences in the well-being of day labourers in South Africa. The rural/urban divide in terms of the subjective well-being of day labourers in South Africa also requires focused investigation. Recent xenophobic attacks on foreign workers in South Africa have raised the question of whether the subjective well-being of South African and that of foreign day labourers differ significantly, and, if so, what the reasons for this are. Ideally, follow-up research in the form of repeated studies over time can show how these aspects change and affect the well-being in this growing informal labour market in a country plagued by high levels of unemployment, poverty and inequality.

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Table 1: Demographic profile of day labourers in South Africa, 2007

Country of origin	South Africa: 85.0 per cent Zimbabwe: 9.5 per cent Mozambique: 2.6 per cent Lesotho: 1.4 per cent
Gender	Male: 96.4 per cent Female: 3.6 per cent
Race	African: 92.0 per cent Coloured: 7.3 per cent White & Indian: 0.7 per cent
Age	Younger than 30: 47.1 per cent Between 30 and 35: 22.9 per cent 35 and older: 30 per cent
Education	No schooling: 6 per cent Some primary schooling: 18.7 per cent Completed primary schooling: 9.2 per cent Some secondary schooling: 48.7 per cent Completed secondary schooling: 14.8 per cent Post-school qualification: 1.9 per cent
Marital status	Never married / single: 56.1 per cent Married: 26 per cent Living with a partner: 9.9 per cent Separated / divorced: 5.6 per cent Widowed: 1.5 per cent
Dependents Number of children	Average = 4 Average = 2
Living conditions	Living with their family: 52 per cent Living in permanent structures: 32 per cent
Employment history	Had a full-time job before: 51 per cent <u>Hired more than 3 times by same employer as day labourer:</u> Never: 10 per cent Seldom: 50 per cent Sometimes: 25 per cent Often: 15 per cent

Source: Survey data

Table 2: Means of earnings in a good week, in Rand (ZAR)

	Mean		Mean
<u>Age</u>		<u>Qualification</u>	
Age group: under 20	271	No schooling	379
Age group: 21-25	373	Some primary schooling	314
Age group: 26-30	397	Completed primary school	367
Age group: 31-35	410	Some secondary schooling	362
Age group: 36-40	390	Completed secondary school	543
Age group: 41-45	411	Post-school qualification	547
Age group: 46-50	333		
Age group: 51-55	365	<u>Employment history</u>	
Age group: 56-60	288	Have held a full-time job	348
Age group: over 60	382	Have never held a full-time job	422

Source: Survey data, adapted from Blaauw & Krugell (2011).

Table 3: The expected signs of the variables:

	Expected sign	Reason
<i>Basic variables</i>		
AFRICAN	Irrelevant	Most day labourers are African
MALE	Irrelevant	Most day labourers are male
PRIMARY	+	Education on primary level does not affect SWB negative
SECONDARY	+	Education on secondary level, not completed, does not affect SWB negative
COMPSEC	-	You expect more from life when you have completed secondary school
MARRIED	+	Knight et al. (2009) found that people who are married are happier
DIVORCED	-	One would expect the sign to be negative on psychological grounds
TWENTIES	-	Age usually non-linear with a U-shape. Will expect that the younger the day labourer the less happy he will be, since he is looking for a better life. One must remember that this age group is the one where the most productive years of a nation's workforce and the individual's work life are supposed to be (Gonzo and Plattner, 2003: 47). Spending it in this form of precarious employment is therefore bound to be reflected in unfulfilled expectations and feelings of unhappiness. Older people, on the other hand, are negative because they know it is difficult to enter the formal job market, creating further feelings of despair and self-doubt.
THIRTIES	-	See above
FORTIES	-	See above
OVER50	+	See above
<i>Economic variables</i>		
GOODWEEK	+	If you had a good week's wage you will probably feel positive
FULLTIME	-	If you previously had a full-time job you will probably be negative about being a day labourer, as the wage income in the formal economy will in all probability be much higher than what can be obtained in the informal day labour market.
LOOKFULLTIME	-	If you are currently looking for a full-time job it is assumed that you are unhappy with your current situation
TURNDOWN	-	Previous literature shows that the main reason why a day labourer will turn down an employment opportunity is when the wage offered by the employer is too low, leading to further dejection and despair. The expectation, then, is that this will be negative.
<i>Comparison variables</i>		
JOBSBETTERTHISITE	+	This is a comparison with oneself or with other day labourers. If you feel it is better at this site than your previous site, you will feel you are better off. Better job opportunities do not always lead to being hired more often, given that more day labourers flock to these sites as soon as the site's reputation for 'having better opportunities' becomes known. However, this very possibility makes the day labourer feel better.
FOOD	+	If you have food you will feel more positive about your job (comparison with oneself or other day labourers)
CHANGE	+ OR -	This is a change in income from a good week; the sign depends therefore on whether the change is negative or positive
<i>Attitudinal and community variables</i>		
INJURY	-	If you incurred an injury you will probably have a negative attitude towards your job and your situation
SUPPORT	+	If you are part of a group of day labourers who support each other you will have a positive attitude
STAYFAMILY	+	If you are staying with your family you will have a positive attitude

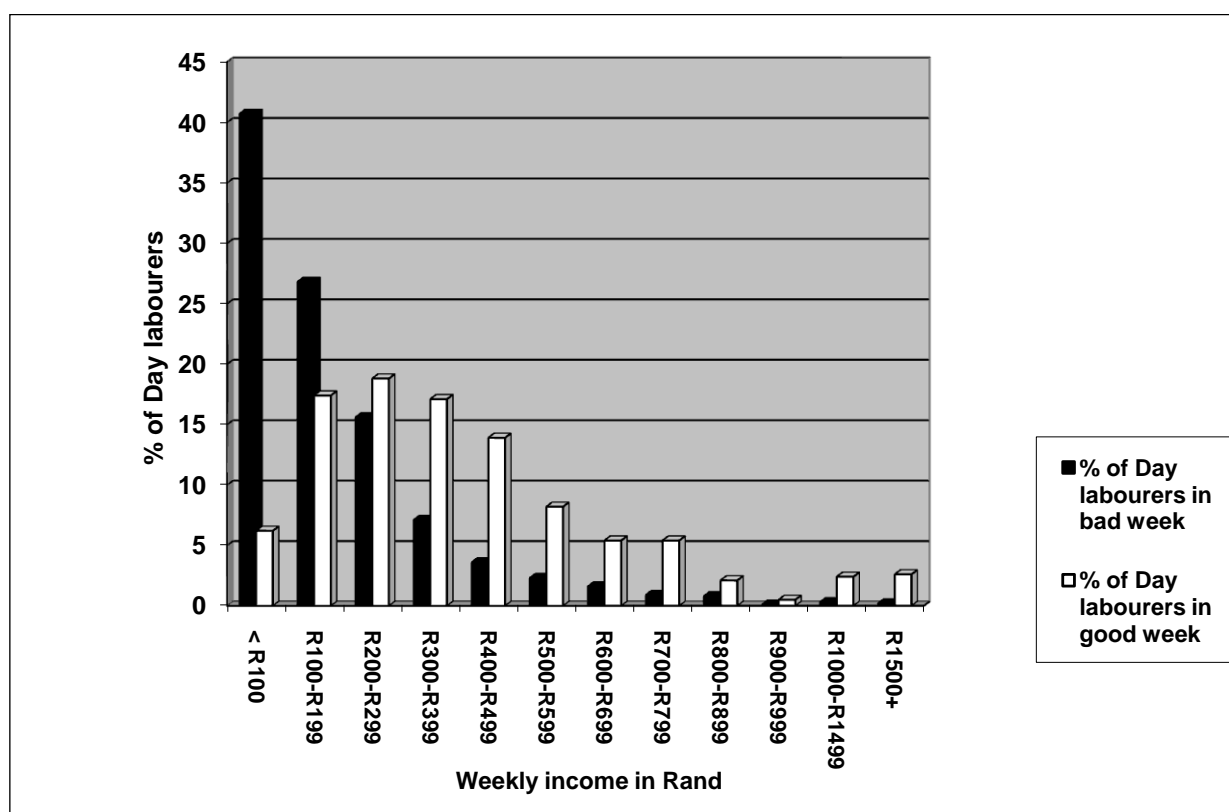
Table 4: Comparing the well-being functions

	Objective function (OLS)		Subjective function (Probit)	
N=2643	Best wage****	T-statistic	Good or bad****	z-statistic
<i>Basic variables</i>				
AFRICAN	0.05	0.91	-0.01	-0.08
MALE	0.04	0.66	-0.43	-2.16**
PRIMARY	0.10	1.74*	-0.29	-1.81*
SECONDARY	0.14	2.24**	-0.11	-0.68
COMPSEC	0.03	0.40	-0.03	-0.15
MARRIED	0.02	0.64	0.01	0.10
DIVORCED	-0.12	-1.89*	0.16	1.01
TWENTIES	-0.01	-0.16	-0.22	-2.12**
THIRTIES	-0.02	-0.59	-0.12	-1.10
FORTIES	0.03	0.57	0.00	0.00
OVER50	0.00	0.06	-0.12	-0.65
<i>Economic variables</i>				
GOODWEEK (Instruments: lowest wage and months)	1.27	3.98***	0.43	4.75***
FULLTIME	0.07	2.56***	-0.26	-3.59***
LOOKFULTIME	0.01	0.11	-0.11	-0.60
TURNDOWN	-0.15	-3.39***	0.00	-0.03
<i>Comparison variables</i>				
JOBSBETTERTHISITE	-0.51	-2.55***	1.86	21.56***
FOOD	-0.04	-1.13	0.53	7.34***
CHANGE	-0.38	-0.88	-0.22	-3.89***
<i>Attitudinal variables</i>				
INJURY	-0.12	-2.72***	0.03	0.28
SUPPORT	0.19	4.82***	-0.15	-1.91*
STAYFAMILY	0.14	3.96***	-0.15	-2.08**
R squared		0.53		0.55

, **, * is the 99,95 and 90% significance levels respectively; *average marginal effects

Source: E-views estimates

Figure 1: The income earned by day labourers in South Africa in a good week versus a bad week, 2007



Source: Survey data

APPENDIX

Endogeneity Test

Equation: EQ_OBFINAL

Specification: LOG(BESTWAGE) B MALE PRIMARY SECONDARY
COMPSEC MARRIED DIVORCED TWENTIES THIRTIES FORTIES
OVER50 LOG(GOODWEEK) FULLTIME LOOKFULLTIME

TURNDOWN

JOBSBETTERTHISITE FOOD INJURY SUPPORT STAYFAMILY C

Instrument specification: C B MALE PRIMARY SECONDARY COMPSEC
MARRIED DIVORCED TWENTIES THIRTIES FORTIES OVER50
FULLTIME LOOKFULLTIME MONTHS TURNDOWN

JOBSBETTERTHIS

ITE FOOD INJURY SUPPORT STAYFAMILY LOG(LOWWAGE)

Endogenous variables to treat as exogenous: LOG(GOODWEEK)

	Value	df	Probability
Difference in J-stats	434.8986	1	0.0000

J-statistic summary:

	Value
Restricted J-statistic	436.9625
Unrestricted J-statistic	2.063985

Instrument Orthogonality C-test Test

Equation: EQ_OBFINAL

Specification: LOG(BESTWAGE) B MALE PRIMARY SECONDARY
COMPSEC MARRIED DIVORCED TWENTIES THIRTIES FORTIES
OVER50 LOG(GOODWEEK) FULLTIME LOOKFULLTIME

TURNDOWN

JOBSBETTERTHISITE FOOD INJURY SUPPORT STAYFAMILY C

Instrument specification: B MALE PRIMARY SECONDARY COMPSEC
MARRIED DIVORCED TWENTIES THIRTIES FORTIES OVER50
FULLTIME LOOKFULLTIME MONTHS TURNDOWN

JOBSBETTERTHISITE FOOD INJURY SUPPORT STAYFAMILY
LOG(LOWWAGE) MONTHS

Test instruments: LOG(LOWWAGE)

	Value	df	Probability
Difference in J-stats	1.139108	1	0.2858

J-statistic summary:

	Value
Restricted J-statistic	1.139108
Unrestricted J-statistic	0.000000

Instrument Orthogonality C-test Test

Equation: EQ_OBFINAL

Specification: LOG(BESTWAGE) B MALE PRIMARY SECONDARY
COMPSEC MARRIED DIVORCED TWENTIES THIRTIES FORTIES
OVER50 LOG(GOODWEEK) FULLTIME LOOKFULLTIME

TURNDOWN

JOBSBETTERTHISITE FOOD INJURY SUPPORT STAYFAMILY C

Instrument specification: B MALE PRIMARY SECONDARY COMPSEC
MARRIED DIVORCED TWENTIES THIRTIES FORTIES OVER50
FULLTIME LOOKFULLTIME MONTHS TURNDOWN

JOBSBETTERTHISITE FOOD INJURY SUPPORT STAYFAMILY
LOG(LOWWAGE) MONTHS

Test instruments: MONTHS

	Value	df	Probability
Difference in J-stats	1.139108	1	0.2858
J-statistic summary:			
	Value		
Restricted J-statistic	1.139108		
Unrestricted J-statistic	0.000000		

Objective function 2SLS:

R-squared	-0.140337	Mean dependent var	4.665406
Adjusted R-squared	-0.149477	S.D. dependent var	0.499201
S.E. of regression	0.535212	Sum squared resid	750.5027
F-statistic	46.42591	Durbin-Watson stat	1.394488
Prob(F-statistic)	0.000000	Second-Stage SSR	378.8672
J-statistic	1.20E-34	Instrument rank	22

Subjective function 2SLS

R-squared	-1.661847	Mean dependent var	0.422407
Adjusted R-squared	-1.683183	S.D. dependent var	0.494036
S.E. of regression	0.809252	Sum squared resid	1715.809
F-statistic	28.17365	Durbin-Watson stat	1.952078
Prob(F-statistic)	0.000000	Second-Stage SSR	257.1306
J-statistic	0.000000	Instrument rank	22